

Work Order ID 85989

June-19-12 1:16:48 PM

\*85989\*

Page 1

Item ID: D212-664-201TRN

Accept

\*N900040100\*

Setup

Start

\*NS1\*

Revision ID:

Item Name: Crosstube Turning Detail

Stop

\*NS2\*

Start Date: 19/06/2012 Start Qty: 1.00 \*1\*

Cust Item ID:

Required Date: 03/07/2012 Req'd Qty: 1.00 \*1\*

Customer:

Reference:

Approvals: Process Plan: ML5

Date: 12/06/12 Tooling:

Date:

Run

Start

\*NR1\*

QC:

Date: SPC (Y/N):

Date:

Stop

\*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								

D212-664-241 Rev D

100 0.00

\*100\*

MORI SEIKI CNC LATHE LARGE

Mori Seiki

Mori Seiki CNC Lathe Large

Memo 0.00

1-Fill tube with sand & install plugs DT8534 on both ends as per Folio FA114

2-Turn first side as per Folio FA114

3-Blend transition lines only, \*\*do not sand whole tube\*\*;

FOLIO REV: A

DWG REV: B

\*Use mill bastard file, brush file repeatedly with file card.

\*Do not use sandpaper coarser than 320 grit.

1 0

MORI  
12/06/12

110

QC1- Inspect dimensions to dimension sheet 0.00

\*110\*

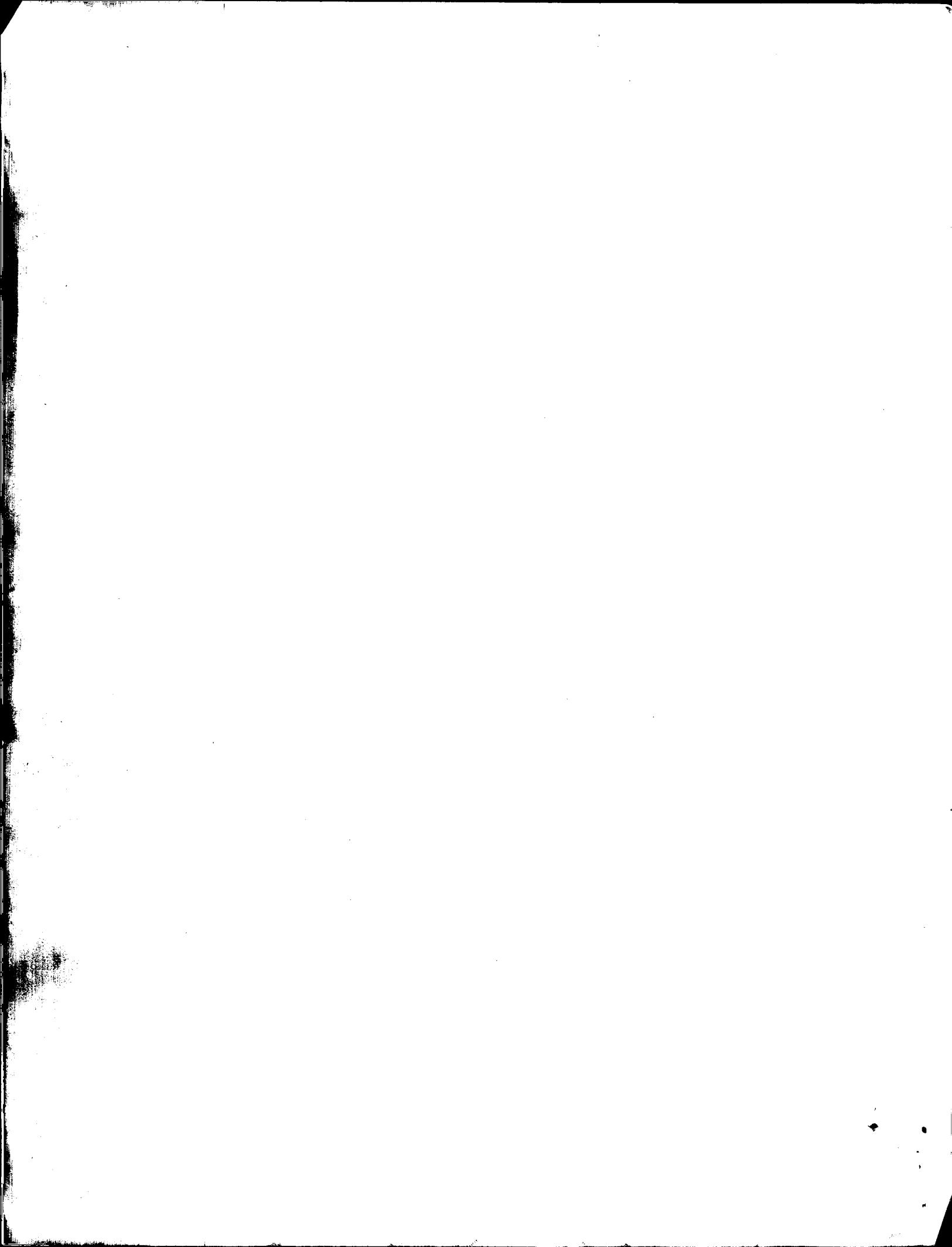
QC

Quality Control

Memo 0.00

1 9

MORI  
12/06/12



**Work Order ID 85989**

June-19-12 1:16:48 PM

**\*85989\***

Page 2

Item ID: D212-664-201TRN

Accept

**\*N900040100\***

Setup Start

**\*NS1\***

Revision ID:

Item Name: Crosstube Turning Detail

Stop

**\*NS2\***

Start Date: 19/06/2012 Start Qty: 1.00

**\*1\***

Cust Item ID:

Required Date: 03/07/2012 Req'd Qty: 1.00

**\*1\***

Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start

**\*NR1\***

QC:

Date:

SPC (Y/N):

Date:

Stop

**\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

120

**\*120\***

Mori Seiki

Mori Seiki CNC Lathe Large

0.00

1 0

mnr.l  
12/08/13

MORI SEIKI CNC LATHE LARGE

Memo

0.00

1-Turn second side as per Folio FA114

2-Blend transition lines only, \*\*do not sand whole tube\*\*:

\*Use mill bastard file, brush file repeatedly with file card.

\*Do not use sandpaper coarser than 320 grit.

FOLIO REV: ADWG REV: D

3-Remove sand and plugs

4- scribe batch # and part # as per dwg

130

**\*130\***

QC

Quality Control

QC1- Inspect dimensions to dimension sheet

0.00

Memo

0.00

1 8

mnr.l  
12/08/13

NCR: Yes / No

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____			DISPOSITION			AGAINST DEPARTMENT/PROCESS														
			Rework <input type="checkbox"/>	Scrap <input type="checkbox"/>	Use-as-is <input type="checkbox"/>	Work Order Update <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Machining <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Finishing <input type="checkbox"/>	Composite <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Supplier <input type="checkbox"/>	Other <input type="checkbox"/>	Engineering <input type="checkbox"/>	Quality <input type="checkbox"/>
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance			Initial Chief Eng	Action Description			Sign & Date	Verification		QC Inspector						
Doc/Data																				
Equip/Tooling																				
Operator																				
Material																				
Offset/Setup																				
Other																				
Process																				
Supplier																				
Training																				
Unauthorized																				
FAULT CATEGORY																				
<b>Landing Gear</b> <input type="checkbox"/> Bending Passes Below Min <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimp at Bending <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Other <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Ripples on Inner Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube				<b>Hardware</b> <input type="checkbox"/> Breaking <input type="checkbox"/> Missing <input type="checkbox"/> Size/Length <input type="checkbox"/> Spinning <input type="checkbox"/> Threading <input type="checkbox"/> Wrong			<b>General</b> <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Documentation/Data <input type="checkbox"/> Finish <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Inspection Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Jigs/Fixtures/Tooling <input type="checkbox"/> Kit Incorrect <input type="checkbox"/> Kit Missing			<input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Off-Set <input type="checkbox"/> Orientation Misread <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Lost <input type="checkbox"/> Part Moved <input type="checkbox"/> Raw Material			<input type="checkbox"/> Set-up <input type="checkbox"/> Supplier <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled							
																<input type="checkbox"/> Other				

**Work-Order ID 85989**

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**\*85989\***

Page 3

Item ID: D212-664-201TRN

Accept

**\*N900040100\***

Setup

Start

**\*NS1\***

Revision ID:

Item Name: Crosstube Turning Detail

Stop

**\*NS2\***

Start Date: 19/06/2012 Start Qty: 1.00

**\*1\***

Cust Item ID:

Required Date: 03/07/2012 Req'd Qty: 1.00

**\*1\***

Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run

Start

**\*NR1\***

QC:

Date:

SPC (Y/N):

Date:

Stop

**\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
140 <b>*140*</b> QC Quality Control	QC8- Inspect parts - second check Memo	0.00 0.00	DAS 16 8-89	12/00/12		JW			12-8-16

145

**\*145\***

Crosstubes

Memo

0.00

0.00

Crosstubes

GRIND ONLY TRANSITION LINES SMOOTH LONGITUDE WAY.

RM 12-8-19

150

**\*150\***

HandFXtube

Hand Finishing Crosstubes

~~Crosstubes Chemical Conversion~~

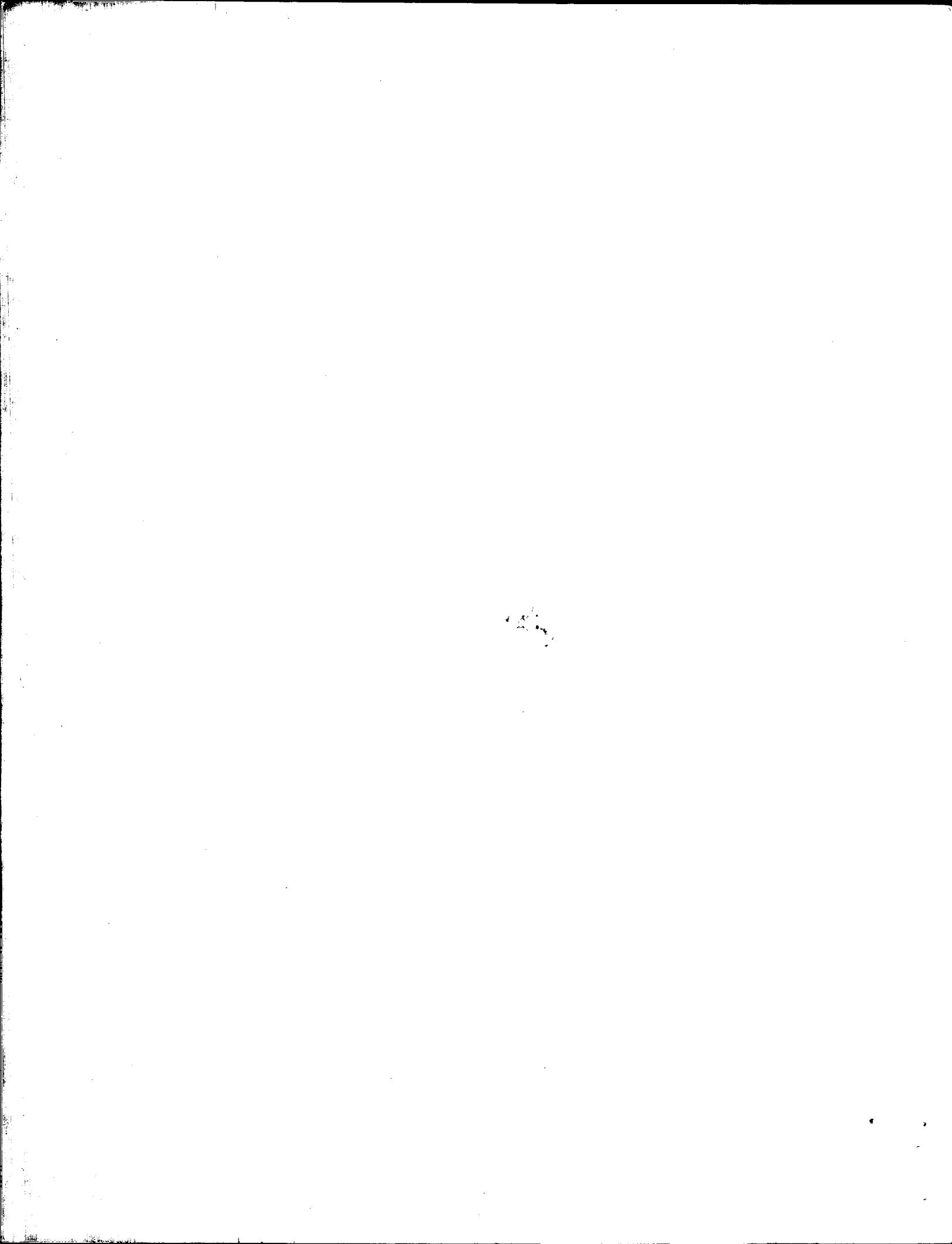
0.00

Memo

0.00

JW 12-8-19  
RM

1- Pressure wash x-tube inside and out  
 2- Acid Etch x-tube inside and out  
 Used red scotch brite.



DQA: \_\_\_\_\_ Date: \_\_\_\_\_

NCR: Yes / No

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

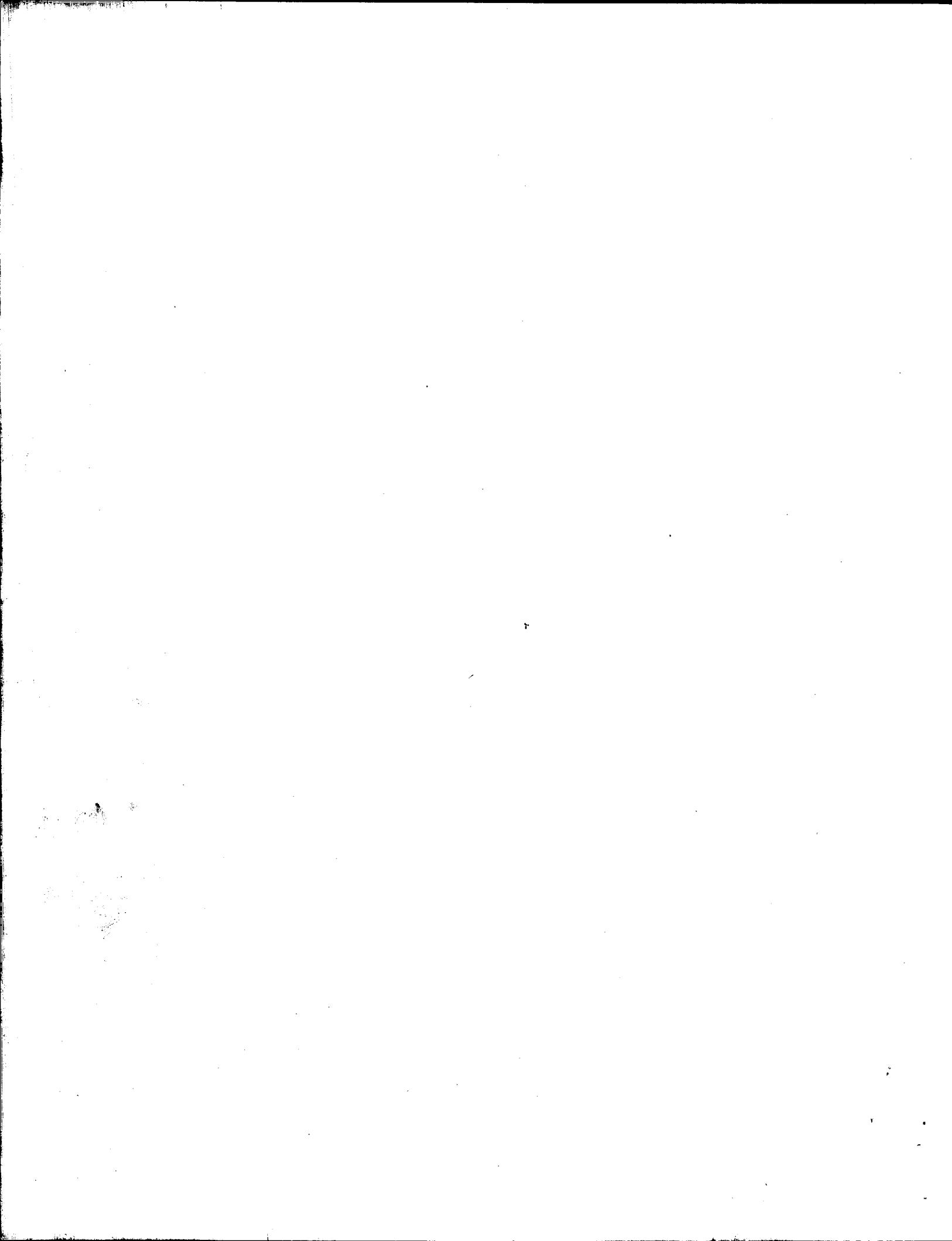
Work Order:	<b>DISPOSITION</b>				<b>AGAINST DEPARTMENT/PROCESS</b>				
Part No.	Rework	<input type="checkbox"/>	Skid-tube	<input type="checkbox"/>	Crosstube	<input type="checkbox"/>	Prod. Eng. Coor.	<input type="checkbox"/>	Engineering
NCR No.	Scrap	<input type="checkbox"/>	Machining	<input type="checkbox"/>	Small Fab	<input type="checkbox"/>	Rec/Store/Packaging	<input type="checkbox"/>	Quality
	Use-as-is	<input type="checkbox"/>	Thermoforming	<input type="checkbox"/>	Finishing	<input type="checkbox"/>	Supplier	<input type="checkbox"/>	
	Work Order Update	<input type="checkbox"/>	Large Fab	<input type="checkbox"/>	Composite	<input type="checkbox"/>	Other	<input type="checkbox"/>	

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data									
Equip/Tooling									
Operator									
Material									
Offset/Setup									
Other									
Process									
Supplier									
Training									
Unauthorized									

**FAULT CATEGORY**

<b>Landing Gear</b>	<b>Hardware</b>	<b>General</b>	
Bending Passes Below Min	<input type="checkbox"/> Breaking	<input type="checkbox"/> Burrs	<input type="checkbox"/> Maintenance
Centre Not Concentric to O/S	<input type="checkbox"/> Missing	<input type="checkbox"/> Contamination	<input type="checkbox"/> Mislabeled
Cracks	<input type="checkbox"/> Size/Length	<input type="checkbox"/> Cut Too Short	<input type="checkbox"/> Off-Set
Crushed/Crimp at Bending	<input type="checkbox"/> Spinning	<input type="checkbox"/> Documentation/Data	<input type="checkbox"/> Orientation Misread
Inspection Strip in Tube	<input type="checkbox"/> Threading	<input type="checkbox"/> Finish	<input type="checkbox"/> Out of Calibration
Other	<input type="checkbox"/> Wrong	<input type="checkbox"/> Inspection Incomplete	<input type="checkbox"/> Out of Sequence
Positioned Wrong	<b>Drill Holes</b>	<input type="checkbox"/> Inspection Unqualified	<input type="checkbox"/> Outside Dimensions
Ripples on Inner Bend	<input type="checkbox"/> Misaligned	<input type="checkbox"/> Instructions Incomplete/Unclear	<input type="checkbox"/> Over/Under tolerance
Torque Waves in Extrusion	<input type="checkbox"/> Ovalized	<input type="checkbox"/> Jigs/Fixtures/Tooling	<input type="checkbox"/> Part Lost
Turning Sequence	<input type="checkbox"/> Over/Undersized	<input type="checkbox"/> Kit Incorrect	<input type="checkbox"/> Part Moved
Wave/Twist in Tube	<input type="checkbox"/> Too Many	<input type="checkbox"/> Kit Missing	<input type="checkbox"/> Raw Material
			<input type="checkbox"/> Set-up
			<input type="checkbox"/> Supplier
			<input type="checkbox"/> Temperature/Cure
			<input type="checkbox"/> Weld
			<input type="checkbox"/> Wrong Stock Pulled
			<input type="checkbox"/> Other





**Picklist Print**

June-19-12 1:16:52 PM

Page 1

Work Order ID: 85989

**\*85989\***  
**\*D212-664-201TRN\***

Parent Item: D212-664-201TRN

Parent Item Name: Crosstube Turning Detail

Start Date: 19/06/2012

Required Date: 03/07/2012

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:A 08-03-06 new issue DD verified by:ec  
 IPP Rev B 08.04.02 Removed polish EC verified DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6006-129		Manufactured	No			120	Each	27.0000	1	1			**

**\*D6006-129\***

Crosstube Material

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
LG	27	
23970	2	
26550	3	
34690	1	
69838	21	

mm L 12/08/11



NCR: Yes / No

## WORK ORDER NON-CONFORMANCE / UPDATE

DQA

Date: 12/08/22

QA Closed:

Date: 22/08/2012

Work Order:	85989	DISPOSITION	Rework	Skid-tube	Crosstube	Prod. Eng. Coor.	Engineering
Part No.	D212-664-201TRN	Scrap	Machining	Small Fab	Finishing	Rec/Store/Packaging	Quality
NCR No.	12-1735	Use-as-is	Thermoforming	Large Fab	Composite	Supplier	
		Work Order Update				Other	

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data									
Equip/Tooling	X	12/08/15	100	1 Cuffs are under tolerance. 2.900" - 2.982" 2.993" - 2.984"	DAS 12 08/15	Acceptable	DAS 16 08/15	(DAS 16 08/15)	(DAS 16 08/15)
Operator									
Material									
Offset/Setup									
Other									
Process	X								
Supplier									
Training									
Unauthorized									

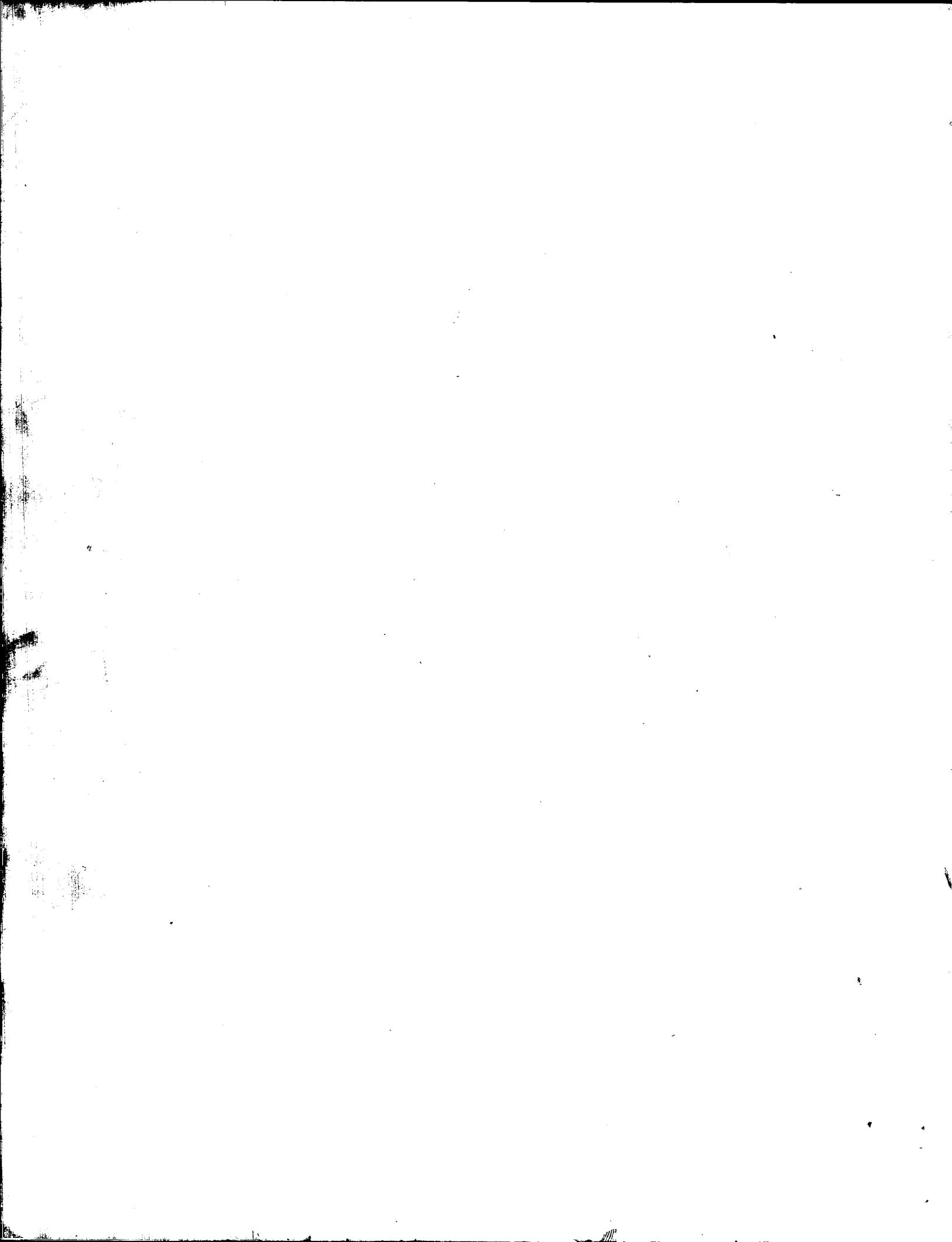
## FAULT CATEGORY

Landing Gear	Hardware	General	
Bending Passes Below Min	Breaking	Burrs	Maintenance
Centre Not Concentric to O/S	Missing	Contamination	Mislabeled
Cracks	Size/Length	Cut Too Short	Off-Set
Crushed/Crimp at Bending	Spinning	Documentation/Data	Orientation Misread
Inspection Strip in Tube	Threading	Finish	Out of Calibration
Other	Wrong	Inspection Incomplete	Out of Sequence
Positioned Wrong		Inspection Unqualified	Outside Dimensions
Ripples on Inner Bend		Instructions Incomplete/Unclear	Over/Under tolerance
Torque Waves in Extrusion		Jigs/Fixtures/Tooling	Part Lost
Turning Sequence	Misaligned	Kit Incorrect	Part Moved
Wave/Twist in Tube	Ovalized	Kit Missing	Raw Material
	Over/Undersized		
	Too Many		

DART AEROSPACE LTD	Work Order:	85989
Description: Crosstube Assembly (205/212 High Aft)	Part Number:	D212-664-241
Inspection Dwg: D212-664-241 Rev: D		Page 1 of 2

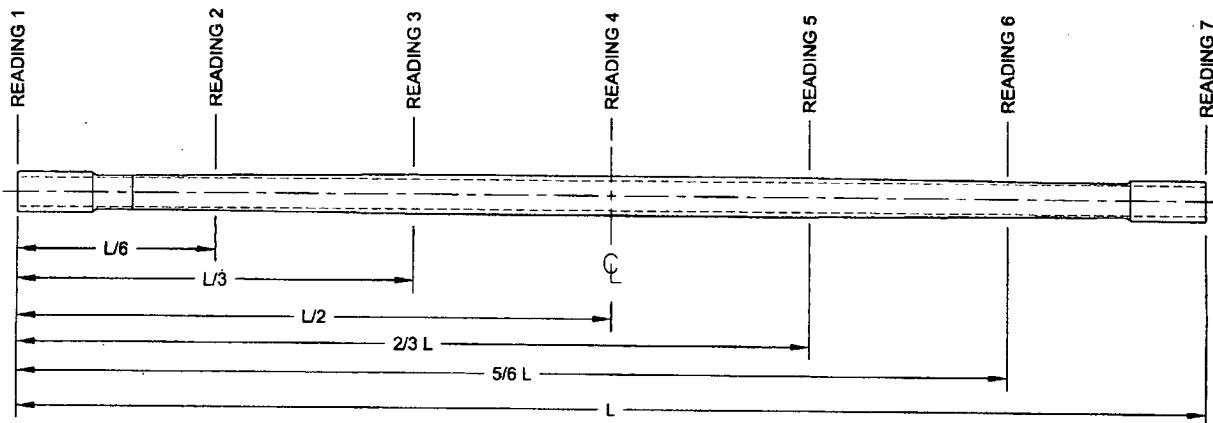
### FIRST ARTICLE INSPECTION CHECKLIST

Inspection Sheet Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
SIDE A	0.200	+/-0.010	.200	✓	vern	CNC-08
	R0.063	+/-0.010	.063	✓	R6	
	2.990	+0.005/-0.000	2.990	✓	vern	CNC-08
	5.237	+/-0.030	5.237	✓		
	2.600	+0.005/-0.000	2.604	✓		
	2.686	+0.005/-0.000	2.690	✓		
	2.770	+0.005/-0.000	2.775	✓		
	2.854	+0.005/-0.000	2.859	✓		
	2.938	+0.005/-0.000	2.941	✓		
	3.021	+0.005/-0.000	3.026	✓		
	3.133	+0.005/-0.000	3.138	✓		
	3.179	+0.005/-0.000	3.183	✓		
SIDE B	0.200	+/-0.010	.200	✓	vern	CNC-08
	R0.063	+/-0.010	.063	✓	R6	
	2.990	+0.005/-0.000	2.992	✓	vern	CNC-08
	5.237	+/-0.030	5.237	✓		
	2.600	+0.005/-0.000	2.605	✓		
	2.686	+0.005/-0.000	2.691	✓		
	2.770	+0.005/-0.000	2.775	✓		
	2.854	+0.005/-0.000	2.859	✓		
	2.938	+0.005/-0.000	2.941	✓		
	3.021	+0.005/-0.000	3.026	✓		
	3.133	+0.005/-0.000	3.138	✓		
	3.179	+0.005/-0.000	3.182	✓		
	124.362	+/-0.020	124.360	—	tape	L6-22



DART AEROSPACE LTD	Work Order:	85989
Description: Crosstube Assembly (205/212 High Aft)	Part Number:	D212-664-241
Inspection Dwg: D212-664-241 Rev: D		Page 2 of 2

### WALL THICKNESS MEASUREMENT



Location	WALL THICKNESS MEASUREMENT (IN)				Deviation $\Delta w$ (max-min)	TOLERANCE
	w1	w2	w3	w4		
READING 1 L= 0"	.393	.381	.381	.393	.012	
READING 2 L= 15	.270	.270	.252	.254	.018	
READING 3 L= 30	.392	.394	.376	.373	.024	
READING 4 L= 62	.519	.516	.519	.518	.003	0.062"
READING 5 L= 30	.407	.381	.361	.382	.040	
READING 6 L= 15	.286	.257	.240	.270	.046	
READING 7 L= CUFF	.401	.366	.377	.402	.036	

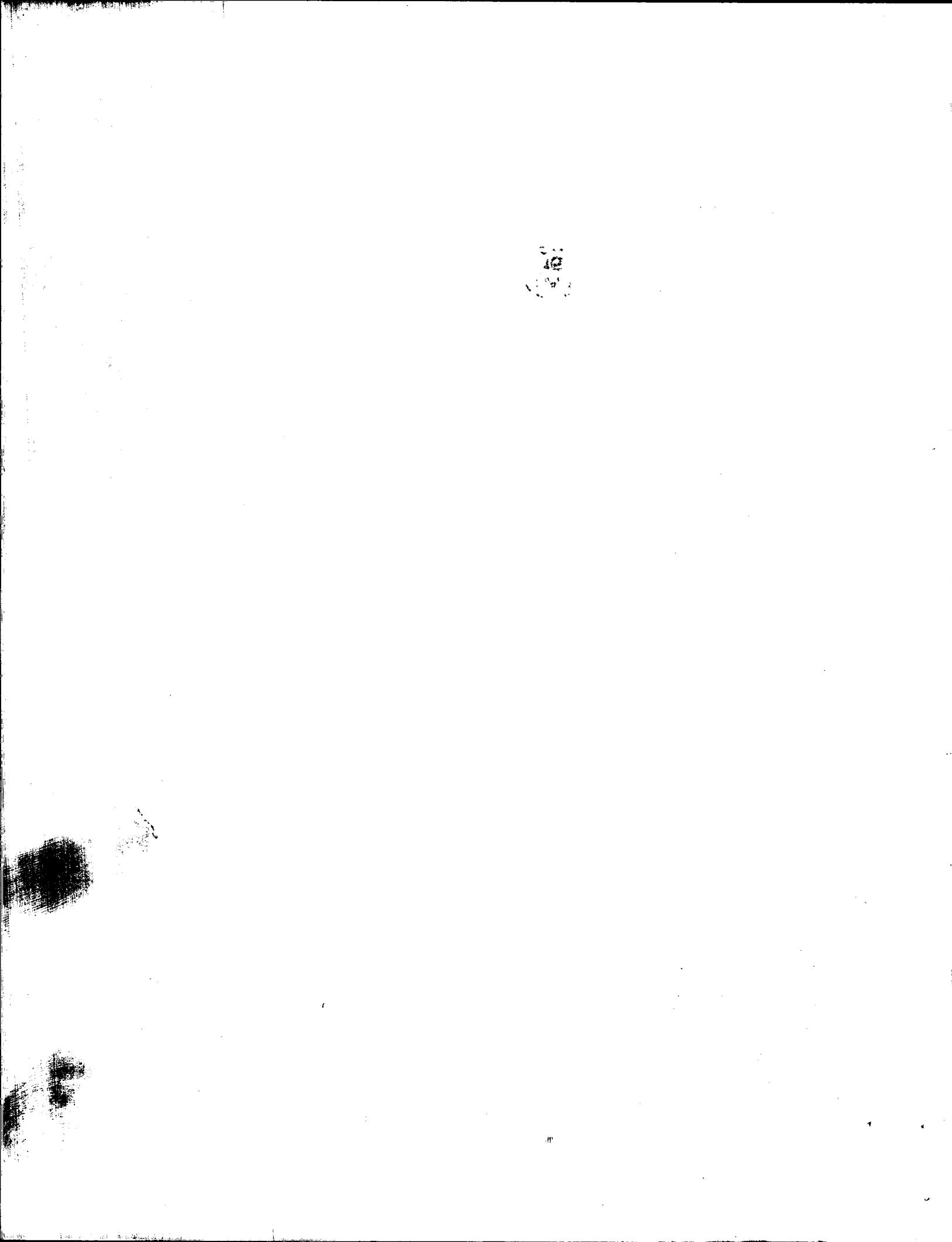
#### Calibration Result

Actual Block Thickness: 250-750

Sitescan 250 Measured Thickness: 250-750

Measured by:	<i>MARL</i>	Audited by:	<i>JW</i>	Preliminary Approval:	
Date:	12/08/13	Date:	12-8-13	12/08/13	Date:

Rev	Date	Change	Revised by	Approved
A	05.04.27	New Issue (P/O D412-664-201)	KJ/JLM	
B	06.03.09	Tolerance for 5.237 was +/- 0.001	KJ/JLM	
C	07.05.08	Dwg Rev. updated	KJ/JLM	
D	10.08.03	Dimension 124.362 was 124.36	KJ	<i>J</i>
E	12.06.04	Wall thickness form added	KJ	<i>M</i>



D

D

Item	Qty	Qty	Part Number	Description
	-241	-241B		
1	X		D212-664-241	CROSSTUBE ASSEMBLY (205/212 HIGH AFT)
2		X	D212-664-241B	CROSSTUBE ASSEMBLY (214 HIGH AFT)
3	1	1	D6006-129	CROSSTUBE
4	2	2	D2940-1	SUPPORT
5	4	4	D3595-063-530	RUBBER CUSHION
6	4	4	MS21920-28	CLAMP (OR MS21920-30)
7	A/R	A/R	MAGNOBOND 6398	ROCKWELL SPECIFICATION RBO-120-023 ADHESIVE (TEXTRON/BELL SPEC. 299-947-100, TYPE II, CLASS 2 ADHESIVE)

**GENERAL NOTES:**

- 1) MATERIAL: MANUFACTURED FROM D6006-129  
FINISHED LENGTH = 124.362±0.020
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2  
PAINT OUTSIDE PER DART QSI 005 4.2
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED.
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX.
- 6) IDENTIFICATION: SCRIBE DART PART NUMBER "D212-664-XXX" AND BATCH NUMBER ON INSIDE OF CUFF USING VIBRATING STYLUS.
- 7) WEIGHT: D212-664-241 = 44.2 lbs (PER IIN-D212-664)  
D212-664-241B = 44.2 lbs (PER IIN-D212-664)
- 8) PART IS SYMMETRIC ABOUT CENTERLINE.
- 9) RUN CUTTER OFF PART. BLEND OUT EDGE LONGITUDINALLY, TRANSITION SHOULD BE SMOOTH.
- 10) BEND PROGRESSIVELY WITH A MINIMUM OF 5 PASSES. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON O.D.
- 11) LIQUID PENETRANT INSPECT OUTSIDE SURFACE OF CROSSTUBE PER QSI 038.
- 12) INSTALL D2940-1 SUPPORT USING 0.03" TO 0.06" THICK LAYER OF MAGNOBOND 6398 TO THE SURFACE OF D2940-1 THAT WILL BE IN CONTACT WITH THE CROSSTUBE PER QSI 015. LET CURE FOR 12 HOURS AFTER INSTALLATION AND PRIOR TO PACKAGING.
- 13) INSTALL MS21920-28 CLAMPS (OR -30) WITH D3595-063-530 RUBBER CUSHIONS TO SECURE THE D2940-1 SUPPORT ON TOP SIDE OF THE CROSSTUBE. ENSURE CLAMPS ARE OPPOSITE OF CROSSTUBE SUPPORT.
- 14) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 15) TORQUE CLAMPS 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING.

SHOP COPY  
RETURN TO  
ENGINEERING  
**UNCONTROLLED COPY**  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER

NO. 85909 MLJ

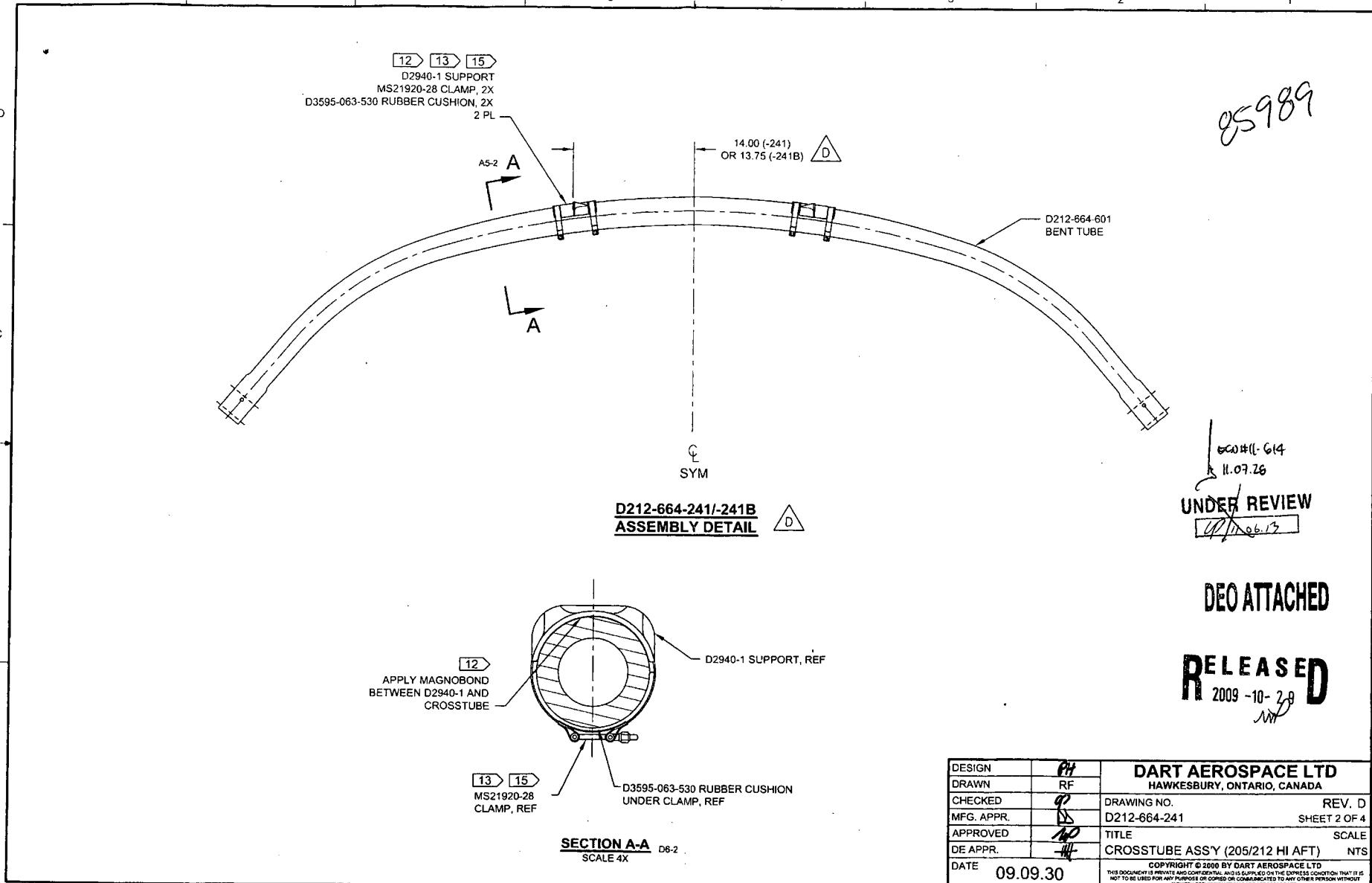
6CW H11-614  
11.08.26

12/06/19 UNDER REVIEW

**DEO ATTACHED****RELEASED**  
2009-10-29

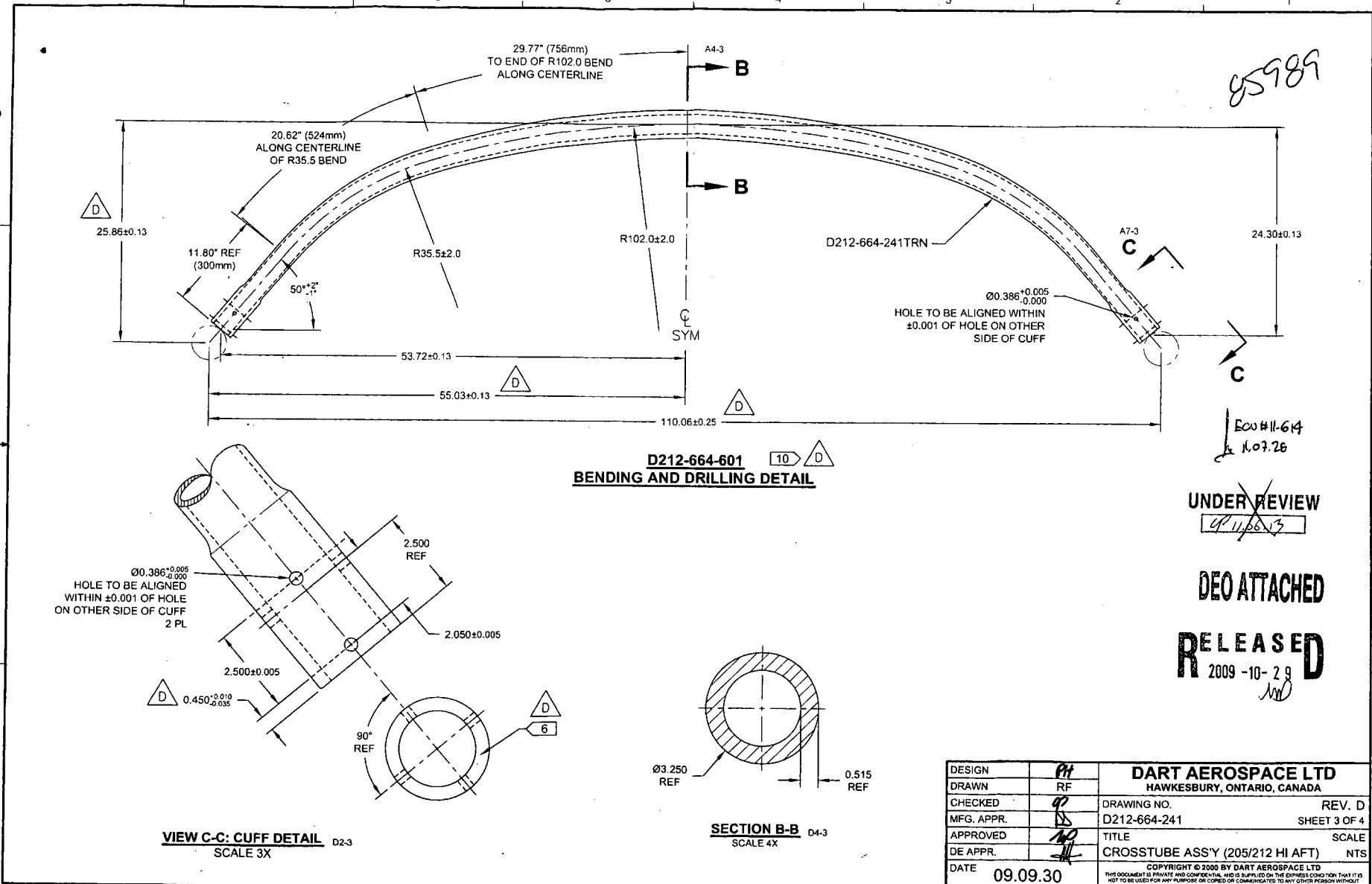
D	REFORMAT/REVISE GENERAL NOTES/PART LIST; REORGANIZED VIEWS AND REFORMATTED DRAWING TO CURRENT STANDARDS; ADD -241B (ZN D4-2, B4-2); REMOVED REF & ADD TOLERANCES (ZN D8-3 & C4-3, C6-3 & AB-3); RELOCATED FLAG #6 PER PAR 08-046 (ZN A5-3); MOVED TURNING DETAIL & UPDATED TOLERANCE TO SHEET 4	RF	09.09.30
C	REMOVE -1009 ABRASION STRIP; ADD MAGNOBOND 6398, CUSHION, REVERSE CLAMPS	PH	07.03.08
B	ADD HOLES FOR COMPATABILITY WITH BHIAA SKIDTUBES	PH	05.02.04
A	NEW ISSUE	PH	00.12.12
REV.	DESCRIPTION	BY	DATE
DESIGN	<i>PH</i>	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	<i>PP</i>	DRAWING NO.	REV. D
MFG. APPR.	<i>DS</i>	D212-664-241	SHEET 1 OF 4
APPROVED	<i>AB</i>	TITLE	SCALE
DE APPR.	<i>AB</i>	CROSSTUBE ASS'Y (205/212 HI AFT)	NTS
DATE	09.09.30	COPYRIGHT © 2009 BY DART AEROSPACE LTD. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

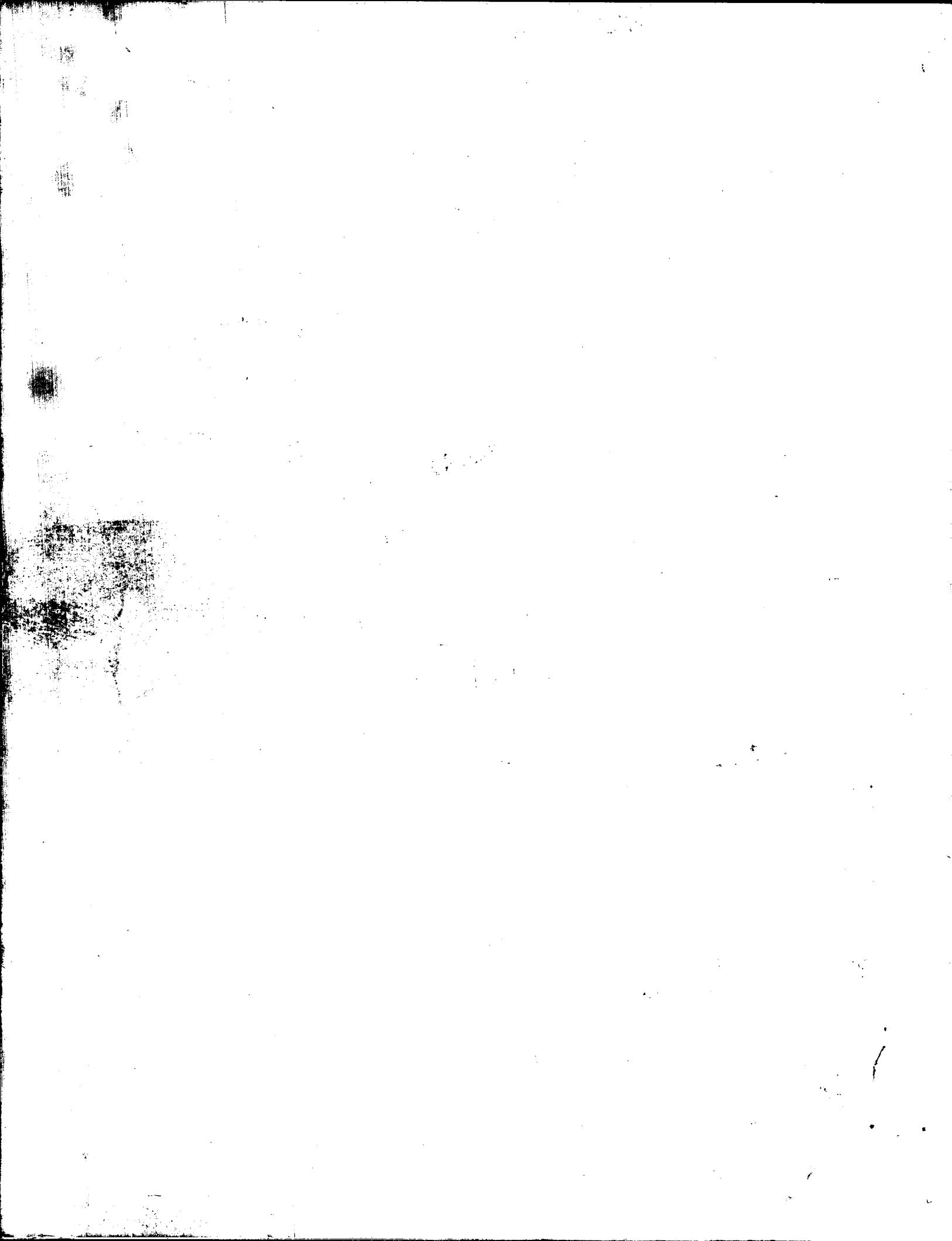


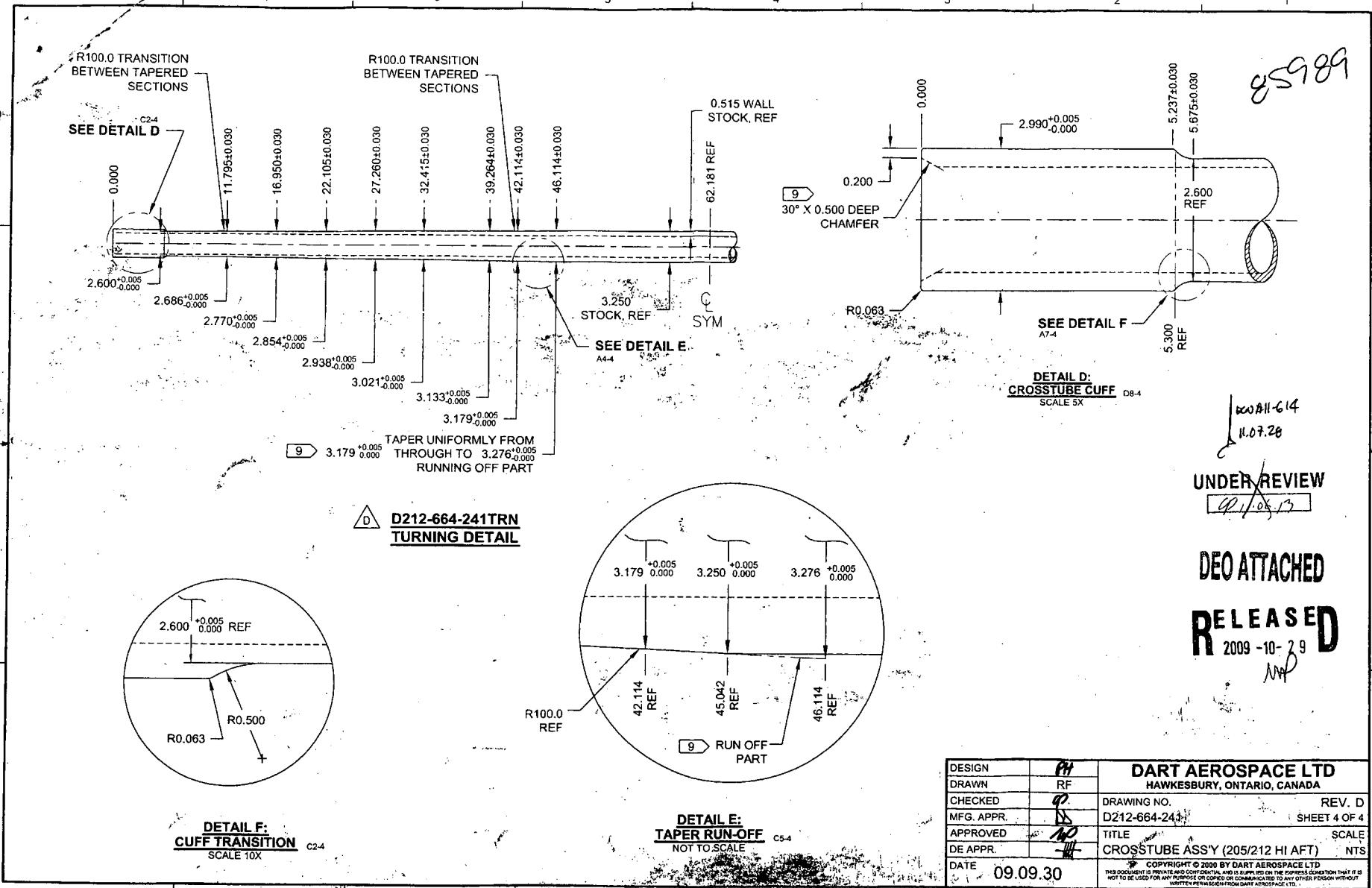


8      7      6      5      4      3      2      1











85989

DRAWING NO. D212-664-241	TITLE CROSSTUBE ASSY (205/212 HI AFT)	REV. D	DART AEROSPACE LTD ENGINEERING ORDER	D.E.O. NO. D212-664-241-D-1	SHEET NO. SHEET 1 OF 2	SCALE NTS
DRAWN DATE 11.04.07	CHECKED DATE 11.04.11	MFG. APPR. E	APPROVED MP	DE APPR.		
		DATE 11.04.12	DATE 11/04/12	DATE 11.04.12		

PURPOSE:

ADD AN INSPECTION WINDOW TO UNDERSIDE OF CROSSTUBE.

CHANGE:

NOTES 2 OF SHEET 1 IS AMENDED AS FOLLOWS:

IS:

- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
 PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2  
 MASK UNDERSIDE OF CROSSTUBE AS SHOWN (HATCHED AREA) AND  
 PAINT OUTSIDE PER DART QSI 005 4.2  
 REMOVE MASKING AND APPLY CLEAR COAT

WAS:

- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
 PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2  
 PAINT OUTSIDE PER DART QSI 005 4.2

RELEASED

2011-04-18

UNDER REVIEW

11.06.13

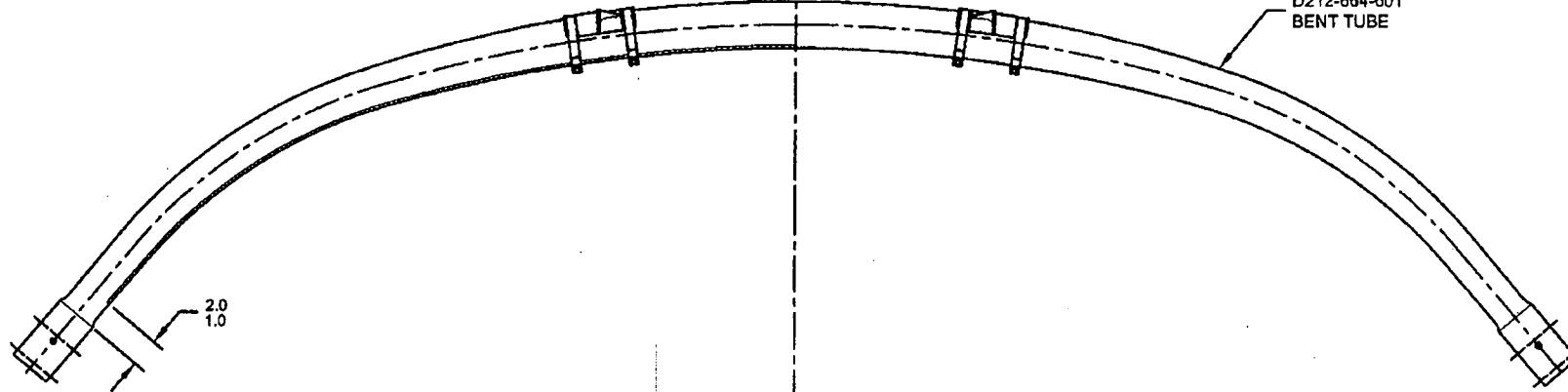
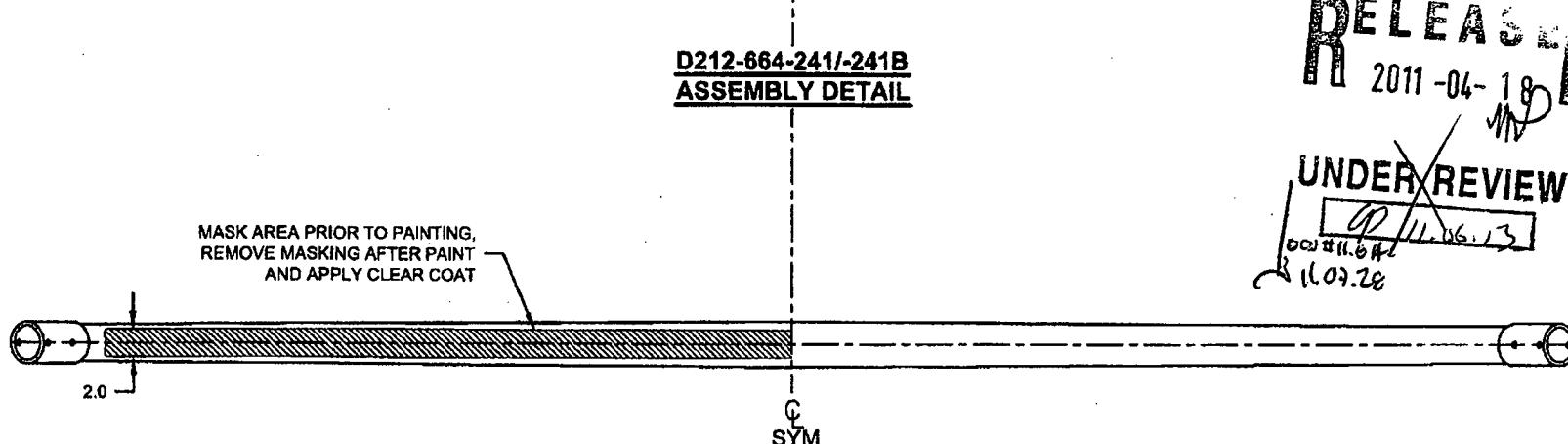
ECUH-614

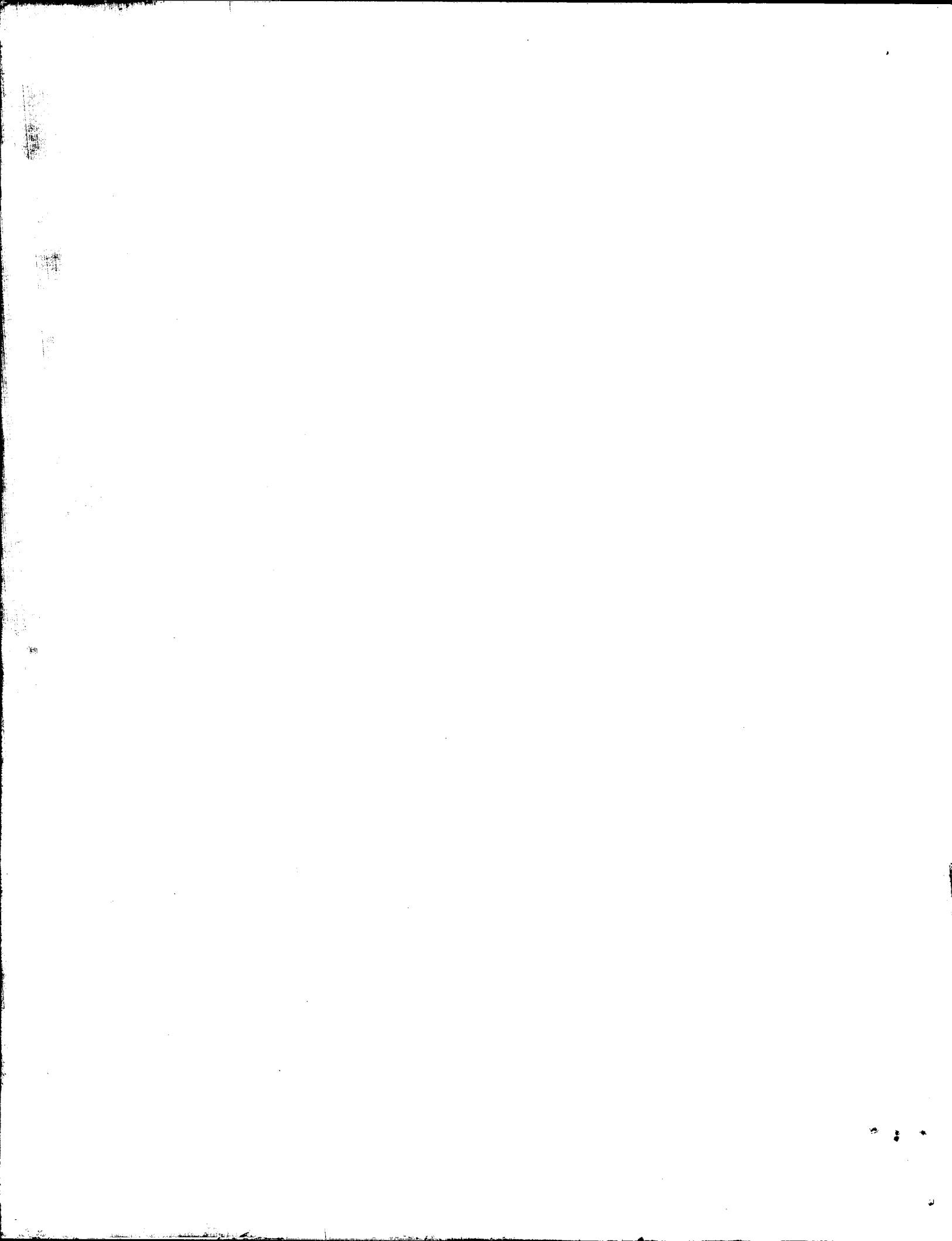
11.07.20



85989

DRAWING NO. D212-664-241	TITLE CROSSTUBE ASSY (205/212 HI AFT)	REV. D	DART AEROSPACE LTD ENGINEERING ORDER	D.E.O. NO. D212-664-241-D-1	SHEET NO. SHEET 2 OF 2	SCALE NTS
DRAWN DATE 11.04.07	CHECKED DATE 11.04.11	MFG. APPR. <i>EP</i> DATE 11.04.12	APPROVED <i>MD</i> DATE 11.04.12	DE APPR. <i>MM</i> DATE 11.04.12		

IS:WAS:



85989

DRAWING NO. D212-664-241	TITLE CROSSTUBE ASS'Y (205/212 HI AFT)	REV. D	DART AEROSPACE LTD ENGINEERING ORDER	D.E.O. NO. D212-664-241-D-2	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN <i>gp</i>	CHECKED <i>ASS</i>	MFG. APPR. <i>BS</i>	APPROVED <i>MAJ</i>	DE APPR. <i>MM</i>		
DATE 11.07.15	DATE 11.07.20	DATE 11.07.21	DATE 11.07.21	DATE 11.07.21	DATE 11.07.21	

**PURPOSE:**

REPLACE MAGNOBOND WITH PROSEAL.

**CHANGE:**

IS:

Item	Qty -241	Qty -241B	Part Number	Description
7	A/R	A/R	PROSEAL 890 B-2	SEALANT, AMS-S-8802 CLASS B-2

**WAS:**

7	A/R	A/R	MAGNOBOND 6398	ROCKWELL SPECIFICATION RBO-120-023 ADHESIVE (TEXTRON/BELL SPEC. 299-947-100, TYPE II, CLASS 2 ADHESIVE)
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NOTE 12 &amp; 15, SHEET 1 IS AMENDED AS FOLLOWS:

IS:

- 12) TO INSTALL D2940-1 SUPPORT: ABRADE MATING SURFACE OF SUPPORT AND CROSSTUBE WITH 180-GRIT SANDPAPER AND REMOVE RESIDUE WITH MEK (OR EQUIVALENT). APPLY A 0.04" TO 0.07" THICK LAYER OF PROSEAL 890 CLASS B-2 (OR AMS-S-8802 CLASS B-2) SEALANT TO MATING SURFACE OF SUPPORT.
- 15) TORQUE CLAMPS 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING. PRIOR TO PACKAGING, RE-CHECK TORQUE ON CLAMPS AFTER PROSEAL 890 SEALANT HAS CURED FOR 72 HOURS.

**WAS:**

- 12) INSTALL D2940-1 SUPPORT USING 0.03" TO 0.06" THICK LAYER OF MAGNOBOND 6398 TO THE SURFACE OF D2940-1 THAT WILL BE IN CONTACT WITH THE CROSSTUBE PER QSI 015. LET CURE FOR 12 HOURS AFTER INSTALLATION AND PRIOR TO PACKAGING.
- 15) TORQUE CLAMPS 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING.

